What is claimed is:

1. A rubber composition comprising (1) a rubber component including at least one of polybutadiene rubber and a styrene-butadiene copolymer rubber having a content of vinyl bond of not less than 30%, (2) at least one compound selected from a compound represented by the following formula (I), a compound represented by the following formula (II), a compound represented by the following formula (III) and a compound represented by the following formula (IV), and (3) an organic thiosulfate compound represented by the following formula (V):

$$\begin{array}{c|c}
R^1 & S & S & S \\
R^2 & NC - S - S - CN & R^3 & \cdots & (I)
\end{array}$$

wherein R¹, R², R³ and R⁴ are independently a straight or branched alkyl group having a carbon number of 3-12 or an aralkyl group having a carbon number of 7-12;

$$\begin{pmatrix} R^5 & S \\ R^6 & NC - S \end{pmatrix}_n M^1 \qquad \dots \qquad (II)$$

wherein R^5 and R^6 are independently a straight or branched alkyl group having a carbon number of 7-12 or an aralkyl group having a carbon number of 7-12, and M^1 is a bivalent or polyvalent metal and n is a number equal to an atomic valence of M^1 ;

wherein R⁷, R⁸, R⁹ and R¹⁰ are independently a straight or branched alkyl group having a carbon number of 3-12 or an aralkyl group having a carbon number of 7-12;

$$\begin{pmatrix} R^{11} & S \\ R^{12} & P - S \end{pmatrix}_{m} M^{2} \qquad \cdots \qquad (IV)$$

wherein R^{11} and R^{12} are independently a straight or branched alkyl group having a carbon number of 1-18 or a cycloalkyl group having a carbon number of 5-12, and M^2 is zinc, copper or iron and m is a number equal to an atomic valence of M^2 ;

$$M^{3}O_{3}S - S - (CH_{2})_{o} - S - SO_{3}M^{3}$$
 ... (V)

wherein o is a number of 3-10 and M³ is one equivalent of lithium, potassium, sodium, magnesium, calcium, barium, zinc, nickel or cobalt, provided that the compound may contain crystal water.

- 2. A rubber composition according to claim 1, wherein R¹, R², R³ and R⁴ in the formula (I) are independently a straight or branched alkyl group having a carbon number of 8-12.
- 3. A rubber composition according to claim 2, wherein each of R^1 , R^2 , R^3 and R^4 is 2-ethylhexyl group.
- 4. A rubber composition according to claim 1, wherein R¹¹ and R¹² in the formula (IV) are independently a straight or branched alkyl group having a carbon number of 2-8.
- 5. A rubber composition according to claim 4, wherein each of R¹¹ and R¹² is isopropyl group or n-butyl group.
- 6. A rubber composition according to claim 1, wherein the styrene-butadiene copolymer rubber has a bound styrene content of 20-60 mass%.
- 7. A rubber composition according to claim 1, wherein a content of the styrene-butadiene copolymer rubber in the rubber component is 50-100 mass%.
- 8. A rubber composition according to claim 1, wherein the organic thiosulfate compound represented by the formula (V) is sodium 1,6-hexamethylene dithiosulfate dihydrate.
- 9. A rubber composition according to claim 1, wherein a total amount of the compound of the formula (I), the compound of the formula (II) and the compound of the formula (III) is 0.5-10 parts by mass based on 100 parts by mass of the rubber component.
- 10. A rubber composition according to claim 9, wherein an amount of the compound of the formula (I) is 0.5-10 parts by mass based on 100 parts by mass of the rubber component.
 - 11. A rubber composition according to claim 1, wherein an amount of the

compound of the formula (IV) is 0.1-5 parts by mass based on 100 parts by mass of the rubber component.

- 12. A rubber composition according to claim 1, wherein an amount of the compound of the formula (V) is 1-10 parts by mass based on 100 parts by mass of the rubber component.
- 13. A pneumatic tire characterized by using a rubber composition as claimed in any one of claims 1 to 12 in a tread.